

## *OXALIS DINES*, A NEW SPECIES FROM THE WESTERN CAPE\*

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### ABSTRACT

On morphological, geographical, and cytological grounds, *Oxalis disticha* Jacq. var. *alba* Salter is raised to specific status as *O. dines* Ornduff.

### UITTREKSEL

*OXALIS DINES*, 'N NUWE SOORT VANAF DIE WES-KAAP.

Vir morfologiese, geografiese en sitologiese redes word *Oxalis disticha* Jacq. var. *alba* tot soortrang verhef as *Oxalis dines* Ornduff.

During field work associated with studies of reproductive systems of various heterostylous *Oxalis* species in the Cape Province I collected all five species of section Campanulatae, including the two varieties of *O. disticha* Jacq. that were recognized by Salter (1944). Subsequent studies of these two varieties indicate that they are distinct from each other in a number of characteristics beyond those mentioned by Salter and lead to the conclusion that each merits specific status. As a result, I am raising *O. disticha* var. *alba* Salter to specific rank:

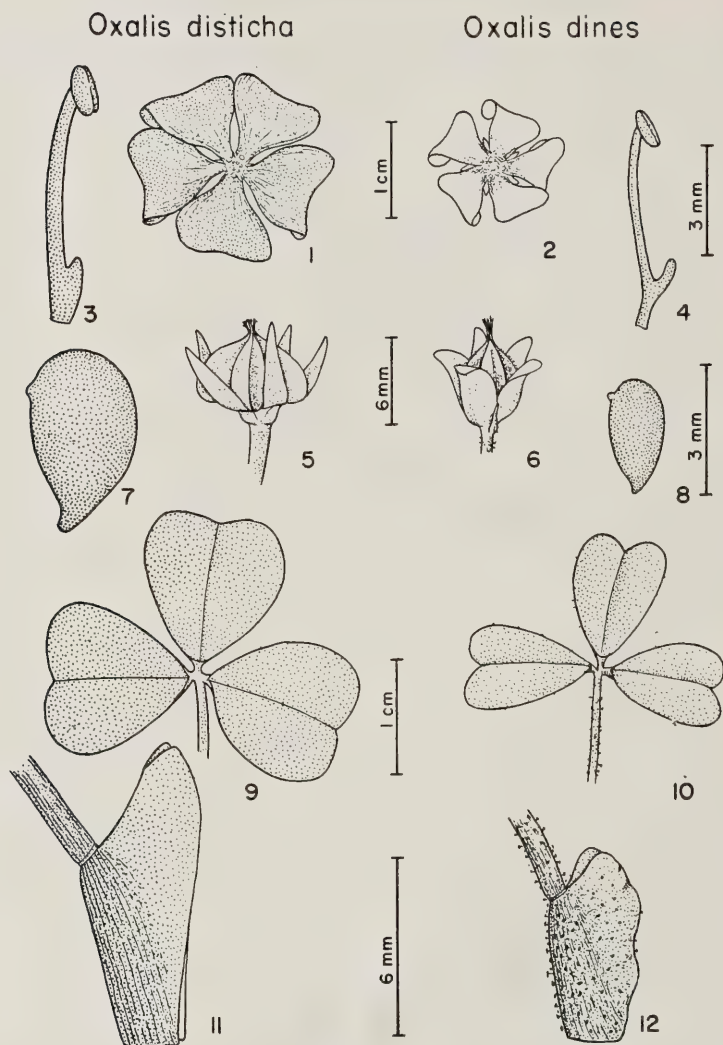
*Oxalis dines* Ornduff, stat. et nom. nov.

*O. disticha* Jacq. var.  $\beta$  *alba* Salter in Jl S. Afr. Bot. Suppl. Vol. 1: 187.  
Holotype *Schlechter* 10874, BOL!

*Oxalis dines* differs from *O. disticha* in a number of morphological characteristics (Figure 1; Table 1). In addition, *O. dines* has  $n = 7$  (based on Ornduff 7471, N end of Botterkloof Pass, UC) and *O. disticha* has  $n = 8$  (based on Ornduff 7166, 1 mi N Pools siding; Ornduff 7297, nr Koperfontein, both UC). The floral scent of *O. dines* is intense and distinctively different from the weaker scent of *O. disticha*. The two species are allopatric: *O. disticha* is known only from seasonal pools in the vicinity of Pools (siding) NE of Piketberg, from the vicinity of Piketberg, and from the vicinity of Koperfontein, localities that are approximately 50–80 mi N of Cape Town. This series of three disjunct populations occupies an area that is approximately 30 miles in length. *Oxalis dines*

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FIGS. 1—12.

Morphological characters of *Oxalis disticha* and *O. dines* of taxonomic value. Fig. 1, 2, corollas; stippling indicates areas of yellow pigmentation. Fig. 3, 4, stamens. Fig. 5, 6, capsules. Fig. 7, 8, seeds after removal of testa. Fig. 9, 10, leaves. Fig. 11, 12, stipules and base of petioles.

likewise is restricted in distribution, known only from a few localities NE of Clanwilliam and from the vicinity of Clanwilliam. Both species are aquatic and occupy seasonal pools; Salter (1944: 187) erred in stating that *O. dines* "does not occur in clay" since the single population of this species that I observed occupied the heavy clay soil in the bed of a drying pool. I have not been able to locate populations of either species beyond some of those cited by Salter (1944: 186–187) and I believe that others of the populations cited by him are now extinct. In my opinion, *O. disticha* may be as closely related to *O. uliginosa* Schlechter (also  $n = 8$ , based on *Ornduff* 7209, ca 19 mi NE Kamieskroon), as it is to *O. dines*.

Artificial hybrids between *Oxalis disticha* and *O. dines* are obtained only with great difficulty; the single hybrid plant that I have grown to maturity (*O. dines* 7471  $\times$  *O. disticha* 7297) produced pollen with a stainability of 58% in aniline blue-lactophenol. However, this figure is undoubtedly an overestimate of the pollen fertility of the interspecific hybrid since a number of grains scored as viable were misshapen and probably non-functional.

The species is named in honour of Mrs. Enid du Plessis; the specific name is the genitive singular of the Latinized Greek word *dine*, an anagram of Enid, but it also means "of a whirlwind".

# REFERENCES

SALTER, T. M., 1944. The genus *Oxalis* in South Africa. *Jl S. Afr. Bot. Suppl.* Vol. 1: 1–355.

TABLE 1.

Characters distinguishing *Oxalis dines* from *O. disticha*. See also Figs. 1–12.

|                        | <i>O. dines</i>          | <i>O. disticha</i>        |
|------------------------|--------------------------|---------------------------|
| Flower colour          | predominantly white      | yellow                    |
| Corolla length         | 1,3–1,5 cm               | 1,8–2,2 cm                |
| Filament tooth         | prominent, cylindric     | short, deltoid            |
| Sepal length           | 4–6 mm                   | 5–8 mm                    |
| Sepal shape            | ovate                    | narrowly ovate-triangular |
| Leaflet shape          | narrowly obcordate       | broadly obcordate         |
| Pubescence             | copious, esp. on petiole | sparse or absent          |
| Stipule                | sinus divided to petiole | fused below sinus         |
| Floral scent           | strong, distinctive      | weak, distinctive         |
| Haploid chromosome no. | 7                        | 8                         |